

CLAIMS

1. A photothermal conversion spectroscopic analysis method having a convergent irradiation step of convergently irradiating exciting light and detecting light onto a sample using a converging lens, and a measurement step of measuring a change in intensity accompanying deflection of the detecting light upon passing through a thermal lens produced through the convergent irradiation of the exciting light,
  - 10 characterized in that:  
the exciting light and the detecting light convergently irradiated in said convergent irradiation step have different frequencies to one another; and
  - 15 the converging lens satisfies a condition that a length of a shift in a focal position of the detecting light from a focal position of the exciting light is in a range of 2 times to 30 times a confocal length at the frequency of the exciting light.
- 20 2. A photothermal conversion spectroscopic analysis method having a convergent irradiation step of convergently irradiating exciting light and detecting light onto a sample using a converging lens, and a measurement step of measuring a change in intensity accompanying deflection of the detecting light upon passing through a thermal lens produced through the convergent irradiation of the exciting light,
  - 25 characterized in that:  
the convergently irradiated exciting light and detecting light have different frequencies to one another; and
  - 30 the converging lens satisfies a condition that a length of a shift in a focal position of the detecting light from a focal position of the exciting light is in a range of 2 times to 25 times a confocal length at the

frequency of the exciting light.

3. A photothermal conversion spectroscopic analysis method as claimed in claim 1 or 2, characterized in that the converging lens is a rod lens.

5 4. A photothermal conversion spectroscopic analysis apparatus comprising a converging lens for convergently irradiating exciting light and detecting light onto a sample, and measurement means for measuring a change in intensity accompanying deflection of the  
10 10 detecting light upon passing through a thermal lens produced through the convergent irradiation of the exciting light,

characterized in that:

15 the convergently irradiated exciting light and detecting light have different frequencies to one another; and

20 said converging lens satisfies a condition that a length of a shift in a focal position of the detecting light from a focal position of the exciting light is in a range of 2 times to 30 times a confocal length at the frequency of the exciting light.

5. A photothermal conversion spectroscopic analysis apparatus comprising a converging lens for convergently irradiating exciting light and detecting light onto a sample, and measurement means for measuring a change in intensity accompanying deflection of the  
25 25 detecting light upon passing through a thermal lens produced through the convergent irradiation of the exciting light,

30 characterized in that:

the convergently irradiated exciting light and detecting light have different frequencies to one another; and

35 said converging lens satisfies a condition that a length of a shift in a focal position of the detecting

light from a focal position of the exciting light is in a range of 2 times to 25 times a confocal length at the frequency of the exciting light.

6. A photothermal conversion spectroscopic analysis apparatus as claimed in claim 4 or 5, characterized in that said converging lens is a rod lens.